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     (FILE 'HOME' ENTERED AT 16:55:12 ON 21 JUL 2006)

     FILE 'CAPLUS' ENTERED AT 16:55:26 ON 21 JUL 2006
L1            96 S CAPROLACTA? AND (AMMONIA OR AMONI?) AND WATER?
L2            15 S L1 AND DISTIL?


COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      52.23      52.44

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                     -11.25     -11.25

STN INTERNATIONAL LOGOFF AT 16:57:27 ON 21 JUL 2006
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L2 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:669703 CAPLUS Full-text
TI Hydroxylamine sulfate production process
IN Mamedov, A. A.; Barabash, I. I.; Konoplina, O. V.
PA Ukrainskii Gos. Nauchno-Issledovatel'skii i Proektnyi Inst. Azotnoi Promyshlennosti i Produktov Org. Sinteza, Ukraine
SO Russ., 5 pp.
CODEN: RUXXE7
DT Patent
LA Russian
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	RU 2279401	C2	20060710	RU 2004-122497	20040722
PRAI	UA 2003-87439	A	20030806		

AB FIELD: industrial organic synthesis.SUBSTANCE: hydroxylamine sulfate (starting material in production of caprolactam) production process comprises: preparing reaction mixture of ammonia, oxygen, and water steam; catalytically oxidizing ammonia at pressure above 0.3 MPa; stabilizing composition of nitrose gas via hydrogenation of silver-manganese catalyst; concentrating nitrose gas by means of water steam condensation; combining concentrated nitrose gas with hydrogen and mixture of sulfuric acid, distillate produced in nitric acid condensate concentration, a part of secondary steam condensate produced during concentration of hydroxylamine sulfate, and catalysate remaining after catalytic hydrogenation of nitric acid contained in concentrated nitric acid condensate; catalytically hydrogenating nitric acid; and synthesis of hydroxylamine sulfate. Invention is characterized by that, (i) for concentration of nitric acid condensate to weight percentage of nitric acid 8%, heat of water steam condensation proceeding during concentration of nitrose gas is used; and (ii) hydroxylamine sulfate solution is concentrated to weight percentage 38% using heat of condensation of distillate vapors produced during concentration of nitric acid condensate in distillation column.EFFECT: reduced power consumption at the same specific intake of raw materials.1 dwg, 1 tbl.

L2 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1314289 CAPLUS Full-text
DN 144:52059
TI Method for separating ammonia and water from mixtures, arising during the production of polyamides.
IN Assmann, Jens; Demeter, Juergen; Deininger, Juergen; Soetje, Oliver; Kory, Gad; Loening, Jan-Martin
PA Basf Aktiengesellschaft, Germany
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005118692	A1	20051215	WO 2005-EP5833	20050531
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 102004027022	A1	20060105	DE 2004-102004027022	20040602
PRAI	DE 2004-102004027022	A	20040602		

AB A method for the distillative separation of ammonia and water from mixts. arising during the production of polyamides comprises 2 steps: (a) the mixture is distilled at 180 - 2600° and 11 - 35 bars, resulting in the production of water, ammonia and cyclopentanone as overhead products (K1), and water, lactam and/or diamines and, optionally, aminonitrile and/or dinitrile, as base products (S1), and (b) K1 is distilled at 11 - 35 bars, resulting in the production of ammonia and cyclopentanone as an overhead product, and water as a base product (S2).

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1197875 CAPLUS Full-text
DN 143:406259
TI Method for obtaining high-purity caprolactam
IN Danilczyk, Natalia; Gucwa, Antoni Janusz; Gwizdak, Marek; Izydorczyk, Kazimierz; Kania, Jan; Lonak, Boguslaw; Maciszewski, Leszek; Maczuga, Jan; Makal, Konstanty; Malinowska, Magdalena; Rygiel, Stanislaw; Szparski, Jozef; Wais, Jan
PA Zaklady Azotowe w Tarnowie-Moscicach SA, Pol.; Biuro Projektow Zakladow Azotowych Biprozat-Tarnow Sp.z oo.
SO Pol., 6 pp.
CODEN: POXXA7
DT Patent
LA Polish
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI PL 188522	B1	20050228	PL 1997-321644	19970813
PRAI PL 1997-321644		19970813		

AB High-purity caprolactam is prepared by the Beckmann rearrangement of cyclohexanone oxime in the presence of oleum, the mixture is neutralized with aqueous ammonia, extracted with trichloroethylene and water , distilled, and crystallized

L2 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:140974 CAPLUS Full-text
DN 142:200998
TI Method for producing hydroxylamine sulfate
IN Mamedov, Abil Abasovich; Barabash, Ivan Ivanovich; Konoplina, Olga Viktorovna
PA Ukrainian State Scientific and Research Institute of Nitric Industry and Organic Synthesis Products UKRGIAP, Ukraine
SO PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DT Patent
LA Russian
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005014473	A1	20050217	WO 2004-UA31	20040518

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI UA 2003-87438 A 20030806

AB Hydroxylamine sulfate (HAS) is produced by preparing a reaction mixture containing ammonia, oxygen, and steam, catalytically oxidizing ammonia at > 0.3 MPa, concentrating produced NO by condensating the water vapor, mixing NO with H2, a mixture of sulfuric acid, water, and the condensate of the concentrated NO to produce HAS. The heat of the NO is used for concentrating the nitric acid containing condensate and the HAS solution The nitric acid condensate is concentrated until a nitric acid mass fraction of > 40% is obtained which can be used for producing mineral fertilizers. The HAS solution is concentrated until a mass fraction of > 40% is obtained using the distillate condensing heat produced during nitric acid condensate concentration The produced HAS can be used for caprolactam production

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:1127152 CAPLUS Full-text
DN 142:74968
TI Hydrolytic and distillation method for making ε-caprolactam from impure 6-aminocapronitrile in which tetrahydroazepine is not removed until after the ε-caprolactam is produced
IN Kirby, Gregory S.; Ostermaier, John J.
PA Invista North America S.A.R.L., USA
SO U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004260087	A1	20041223	US 2003-464104	20030617
	US 6858728	B2	20050222		
	WO 2005000808	A1	20050106	WO 2004-US19442	20040617
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1636179	A1	20060322	EP 2004-785751	20040617
	R: BE, DE, FR, NL				
PRAI	US 2003-464104	A	20030617		
	WO 2004-US19442	W	20040617		

AB A method for making caprolactam from an impure 6-aminocapronitrile (ACN), obtained by the partial hydrogenation of adiponitrile, which comprises 6-aminocapronitrile and both ACN and ≥500 ppm tetrahydroazepine and its derivs. (THA), comprises: (1) contacting the impure ACN comprising both ACN and THA with water at elevated temperature in the presence of a dehydration catalyst (e.g., alumina), both the impure ACN and the water being in the vapor phase, to produce a vapor-phase reaction product that comprises ε- caprolactam, ammonia, water, ACN, and THA; (2) separating the ammonia and a major portion of the water from the vapor-phase reaction product to produce a solution comprising ε-caprolactam and a minor portion of the water , and then separating the water from the solution to produce a melt comprising ε-caprolactam, ACN and THA; (3) introducing the melt into a low-boiler-removal distillation column and removing a major portion of both the THA and ACN as a distillate, and removing ε-caprolactam, high boilers and at most a minor portion of both the THA and ACN as a bottoms; and (4) introducing the bottoms into a high-boiler-removal distillation column and removing ε-caprolactam and at most a minor portion of the high boilers as a distillate product and removing a major portion of the high boilers as a bottoms. Process flow diagrams are presented.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

App's

L2 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:428902 CAPLUS Full-text
DN 140:407268
TI Purification of caprolactam
IN Fischer, Rolf-Hartmuth; Luyken, Hermann; Ansmann, Andreas; Bassler, Peter; Benisch, Christoph; Maixner, Stefan; Melder, Johann-Peter
PA BASF Aktiengesellschaft, Germany
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004043914	A1	20040527	WO 2003-EP12556	20031111
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 10253095	A1	20040617	DE 2002-10253095	20021113
	CA 2505356	AA	20040527	CA 2003-2505356	20031111
	AU 2003282093	A1	20040603	AU 2003-282093	20031111
	EP 1562896	A1	20050817	EP 2003-773710	20031111
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	BR 2003016178	A	20050927	BR 2003-16178	20031111
	JP 2006508115	T2	20060309	JP 2004-550978	20031111
	US 2006041122	A1	20060223	US 2005-534802	20050513
PRAI	DE 2002-10253095	A	20021113		
	WO 2003-EP12556	W	20031111		

AB The invention relates to a method for separating high-boiling material from crude caprolactam, which contains high boilers, caprolactam and, optionally, low boilers, and which has been obtained by: (a) reacting 6-aminocapronitrile with water to form a reaction mixture and (b) separating ammonia and unreacted water out from the reaction mixture while obtaining the crude caprolactam. The invention is characterized in that: (c) the crude caprolactam is fed to a distillation device while obtaining, as a product, a first partial stream via the top, and obtaining a second partial stream via the bottom. During distillation, the pressure is set so that a bottom temperature of at least 170°C is maintained, and the second partial stream is set so that the caprolactam content of the second partial stream is no less than 10 % by weight with regard to the entire second partial stream.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:282869 CAPLUS Full-text
DN 140:304207
TI Method for making caprolactam from impure 6-aminocapronitrile where ammonia and water are removed from crude caprolactam in a simple separation step and then tetrahydroazepine and its derivatives are removed from the resulting caprolactam melt
IN Kirby, Gregory S.; Ostermaier, John J.
PA E. I. Du Pont De Nemours and Company, USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6716977	B1	20040406	US 2003-464175	20030617
WO 2004113288	A1	20041229	WO 2004-US19432	20040617
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1636178	A1	20060322	EP 2004-755552	20040617
R: BE, DE, FR, NL				
PRAI US 2003-464175	A	20030617		
WO 2004-US19432	W	20040617		

AB A method for making caprolactam from an impure 6-aminocapronitrile (ACN) that comprises both ACN and a min. of 500 ppm tetrahydroazepine and its derivs. (THA), comprises: (1) contacting the impure ACN comprising both ACN and THA with water at elevated temps. in the presence of a dehydration catalyst, both the impure ACN and the water being in the vapor phase, to produce a vapor-phase reaction product that comprises caprolactam, ammonia, water, ACN, and THA; (2) separating the ammonia and a major portion of the water from the vapor-phase reaction product to produce a melt comprising caprolactam, ACN and THA; (3) introducing the melt into a low-boiler removal distillation column and removing a major portion of both the THA and ACN as a distillate , and removing caprolactam, high boilers and at most a minor portion of both the THA and ACN as a bottoms product; and (4) introducing the bottoms product into a high-boiler removal distillation column and removing caprolactam and at most a minor portion of the high boilers as a distillate product and removing a major portion of the high boilers as a bottoms product. Process flow diagrams are presented.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:350321 CAPLUS Full-text
DN 132:322256
TI Process for separation of caprolactam from caprolactam sulfate
IN Lucasevici, Traian; Jumanca, Valeriu; Corchez, Aurora
PA S.C. Fibrex S.A., Savinesti, Rom.
SO Rom., 4 pp.
CODEN: RUXXA3
DT Patent
LA Romanian
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	RO 108682	B1	19940729	RO 1991-147760	19910612
PRAI	RO 1991-147760		19910612		

AB In the manufacture of caprolactam by Beckmann rearrangement of cyclohexanone oxime with H2SO4, the lactam (as the sulfate salt) is extracted with benzene or trichloroethylene, the extract is treated with NH3 and sufficient H2O to decompose the salt, the (NH4)2SO4 formed is removed by filtration or centrifugation, and the caprolactam is recovered by distillation The weight ratio of solvent:caprolactam sulfate:water is 1-3:1:0.1-0.3.

L2 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:84721 CAPLUS Full-text
DN 132:137831
TI Method for ammonia distillation in caprolactam manufacture
IN Bocquenet, Gerald; Houssier, Patrick
PA Rhodia Fiber and Resin Intermediates, Fr.
SO PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000005173	A1	20000203	WO 1999-FR1731	19990715
	W: BR, BY, CA, CN, CZ, ID, IN, JP, KR, MX, PL, RO, RU, SG, SK, UA, US, VN				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	FR 2781476	A1	20000128	FR 1998-9530	19980722
	FR 2781476	B1	20000922		
	CA 2337321	AA	20000203	CA 1999-2337321	19990715
	CA 2337321	C	20030211		
	EP 1102720	A1	20010530	EP 1999-929490	19990715
	EP 1102720	B1	20030326		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, RO				
	BR 9912346	A	20020115	BR 1999-12346	19990715
	JP 2002521349	T2	20020716	JP 2000-561131	19990715
	RU 2186026	C1	20020727	RU 2001-104897	19990715
	AT 235423	E	20030415	AT 1999-929490	19990715
	ES 2190225	T3	20030716	ES 1999-929490	19990715
	SK 283702	B6	20031202	SK 2001-108	19990715
	TW 469260	B	20011221	TW 1999-88112391	19990729
	US 6482297	B1	20021119	US 2001-744156	20010606
PRAI	FR 1998-9530	A	19980722		
	WO 1999-FR1731	W	19990715		

AB The invention concerns an improved method for NH3 distillation from a mixture, especially a mixture derived from the reaction between an aminonitrile and water (i.e., cyclizing hydrolysis reaction). The invention concerns a method for distillation of NH3 contained in an aqueous caprolactam solution The distillation is carried out in a column having a bottom temperature of ≤160° and pressure ≤5 bar; the NH3 is withdrawn at the column top at ≥10 bar and then condensed at 25-60°.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:191605 CAPLUS Full-text
DN 124:290535
TI Preparation of caprolactam
IN Achhammer, Guenther; Fuchs, Eberhard
PA BASF A.-G., Germany
SO U.S., 3 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5495016	A	19960227	US 1994-358411	19941219
	DE 4441962	A1	19960530	DE 1994-4441962	19941125
	TW 379219	B	20000111	TW 1995-84106025	19950613
	WO 9616936	A1	19960606	WO 1995-EP4464	19951114
	W: AU, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, MX, NO, NZ, PL, RU, SG, SK, UA				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9539287	A1	19960619	AU 1995-39287	19951114
	EP 793650	A1	19970910	EP 1995-937070	19951114
	EP 793650	B1	20020703		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CN 1166830	A	19971203	CN 1995-196400	19951114
	CN 1070182	B	20010829		
	JP 10509963	T2	19980929	JP 1995-518123	19951114
	RU 2153492	C2	20000727	RU 1997-110061	19951114
	AT 220061	E	20020715	AT 1995-937070	19951114
	CZ 291034	B6	20021211	CZ 1997-1469	19951114
	ES 2179888	T3	20030201	ES 1995-937070	19951114
PRAI	DE 1994-4441962	A	19941125		
	WO 1995-EP4464	W	19951114		

AB Caprolactam is obtained with high selectivity and in high yield starting from 6-aminocapronitrile in the liquid phase, without a catalyst, in short reaction times. A solution of 10% 6-aminocapronitrile in water was heated to 300°, the product mixture (mixture A) contained 90% water and 10% a mixture containing 76% caprolactam and 24% high boilers, this mixture A was then distilled at 100-300 mbar in a column having 5 theor. plates, giving ammonia-containing water as the top product and caprolactam and the high boilers at the bottom of the column (mixture B), then mixture B was separated at 3-10 mbar into a caprolactam fraction (top product) and a high-boiling fraction (bottom product), giving 74% caprolactam.

L2 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:84836 CAPLUS Full-text
DN 120:84836
TI Polymer-mineral mixtures
IN Samigov, Nigmatdzhan A.; Solomatov, Vasilij I.; Dzhalilov, Abdulakhat T.; Usmanov, Said Akrom N.; Fatkhullaev, Erkinzhon; Khabilov, Nadir B.; Kuchkarov, Khusan Ya
PA Tashkent Polytechnic Institute, USSR
SO U.S.S.R.
From: Izobreteniya 1992, (15), 90.
CODEN: URXXAF
DT Patent
LA Russian
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 1728164	A1	19920423	SU 1990-4805730	19900117
PRAI	SU 1990-4805730		19900117		

AB The mixts. comprise H2CO-urea resin 31-32, plaster of Paris from phosphogypsum 63-65, reaction products of polyethylenepolyamine with NaSCN or KCNS in equimol. ratio 0.93-0.96, and superplasticizer 0.25-0.45 weight%, and balance water. The plasticizer is the reaction product of distillation residues from the manufacture of benzoic acid by PhMe oxidation (A), distillation residues from the purification of NH3 manufactured from monoethanolamine (B), and wastewater containing Na carboxylates from the manufacture of caprolactam from PhMe (C) in A/B/C weight ratio 50:11.5:61.5.

L2 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:225351 CAPLUS Full-text
DN 104:225351
TI ε-Aminocaproic acid by hydrolysis of ε-caprolactam
IN Winzer, Werner; Hofmann, Guenter; Schuetze, Ralf; Pester, Rolf; Raese, Hasn Eberhard
PA VEB Leuna-Werke "Walter Ulbricht", Ger. Dem. Rep.
SO Ger. (East), 12 pp.
CODEN: GEXXA8
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 217209	A1	19850109	DD 1983-253547	19830801
PRAI	DD 1983-253547		19830801		

AB An aqueous ε-caprolactam (I) solution containing ≥1 mol NH3/mol I is heated ≤20 h at 120-170°, cooled rapidly to <105°, freed of NH3 by distillation, and freed of unreacted I (especially after concentration by distillation) by extraction, and ε- aminocaproic acid (II) is recovered from the solution by evaporation and crystallization The process gives II without excessive formation of byproducts and waste materials. Thus, 1200 parts 8.0:14.0:78 I-NH3-water mixture was heated to 140°/1.4 MPa during 5 h, and the pressure was decreased to 1 atm with evaporation of water and most of the NH3 (which was condensed and recycled). The reaction mixture, containing II 4.1, I 6.0, and water 87.4%, was distilled to give a concentrate containing II 25.9, I 36.7, and water 37.4%. The concentrate was extracted with Cl2C:CHCl to remove I. The residue was evaporated and crystallized to give 40.9 parts II (98.0% yield). The I was extracted from the Cl2C:CHCl with water and recycled. The loss of I was 1.98%.

L2 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1983:540564 CAPLUS Full-text
DN 99:140564
TI Recovery of caprolactam from products of the Beckmann rearrangement of cyclohexanone oxime neutralized with aqueous ammonia solution
IN Gorodetskii, I. Ya.; Vasin, A. A.; Kostanyan, A. E.; Gogoladze, G. T.; Kervalishvili, Z. Ya.; Pagava, G. A.; Legochkina, L. A.; Tikhonovich, E. S.
PA USSR
SO U.S.S.R.
From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1983, (22), 57.
CODEN: URXXAF
DT Patent
LA Russian
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1022967	A1	19830615	SU 1980-2999411	19800804
PRAI SU 1980-2999411		19800804		

AB Caprolactam (I) [105-60-2] of improved quality is recovered from the title products by separating the lactam oil layer from aqueous (NH4)2SO4 solution, selectively extracting I with an organic extractant from the lactam oil and from the (NH4)2SO4 solution, treating the extract (A) from the (NH4)2SO4 solution with water [which resulted from washing the extract (B) from the I oil layer] prior to adding A to B at 1:100-1:10 ratio of the above water to A, and then distilling

L2 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1966:27133 CAPLUS Full-text
DN 64:27133
OREF 64:4951e-g
TI ε-Caprolactams
IN Isard, Arsene; Lakodey, Andre; Weiss, Francis
PA Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine
SO 10 pp.
DT Patent
LA Unavailable
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 1411872		19650924	FR 1964-985091	19640813

AB ε-Caprolactam (I) is prepared by the reaction of ε-hydroxycaproic acid derivs. with ammonia in a pressure vessel at 140-280° with a catalyst and a suitable solvent; I is distilled, and the polymeric residue heated with ammonia and water at 250-350° in a pressure vessel and extracted with a solvent to give more I. A mixture of 655 g. ε-hydroxycaproamide, 2500 g. dioxane, 850 g. ammonia, and 50 g. Raney Ni are poured into a pressure vessel and heated at 225° for 3.5 hrs. The mixture is cooled, filtered and distilled to give 151 g. ε-hydroxycaproamide, and 266 g. ε-caprolactam. The residue, 159 g. of polymeric material, is heated with 1500 g. 4% ammonia for 3 hrs. at 300° cooled and extracted with 1000 g. CHCl3; evaporation of the solvent gives 54 g. I. The aqueous solution is evaporated in vacuo, and the residue heated at 225° for 3 hrs. with 80 g. anhydrous ammonia, 400 g. dioxane, and 10 g. Raney Ni. The reaction mixture is distilled to give 48 g. I. The total yield of I is 84.5%. A complete study of the reaction conditions, and the influence of the catalysts and solvents on the yield of I is also performed.

L2 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1962:403671 CAPLUS Full-text
DN 57:3671
OREF 57:655f-i,656a-c
TI Radical reactions in solution. Haloalkylation of acrylic acid derivatives
AU Minisci, Francesco; Pallini, Ugo
CS Polytecnico, Milan, Italy
SO Gazzetta Chimica Italiana (1961), 91, 1030-6
CODEN: GCITA9; ISSN: 0016-5603
DT Journal
LA Italian
AB Some new reactions, which allowed addition of an alkyl group and a halo atom to the double bond of acrylic derivs. were described. The alkyl group derived from the decomposition of a peroxide, induced by cuprous and ferrous salts. Thus, 30 g. cyclopentanone peroxide, substantially consisting of 1-hydroxy-1'-hydroperoxycyclopentyl peroxide, was added with stirring and cooling to acrylonitrile (53 g.), CuCl (20 g.), and HCl (6 g.) in water (150 ml.), maintaining the temperature at -10 to -5°. The mixture was extracted with diethyl ether, the extract treated with NaHCO3 solution, the alkaline solution treated with HCl, the oil extracted with Et2O, the extract evaporated, the residue dissolved in MeOH(100 ml. containing, 5 g. H2SO4), and refluxed 3 hrs. The solvent was removed, the residue neutralized, the oil washed with water, and distilled under reduced pressure to give at 95°/0.4 mm. methyl δ-chlorovalerate and at 112-18°/0.4 mm. methyl α-chlorosuberate (I). I refluxed 5 hrs. with 100 ml. HCl concentrated gave α-chlorosuberic acid (II), m. 99-100°(C6H6). II (5.7 g.) in NaHCO3 solution (6.9 g. in 150 ml. H2O) was hydrogenated in the presence of Raney Ni at 105 atmospheric at 115-20° 4 hrs., the catalyst filtered off, and the solution acidified with H2SO4 to give 4.8 g. suberic acid, m. 139-40°. Cyclohexanone (III) (9.8 g.) was dissolved in anhydrous Et2O (50 ml.) containing H2O2 (3.6 g.), the solution allowed to stand 24 hrs. at room temperature, the solvent removed, and the residue added under stirring and cooling together with CH2:CHCN (10.6 g.) to CuCl (6 g.), HCl (3 g.), and H2O (50 ml.) at -50°. The organic layer was extracted with NaHCO3 solution, the acids obtained from the alkaline solution esterified with MeOH, and distilled to give methyl α-chloroazelaate (IV), b1 125°, and methyl ε-chlorocaproate (V), b16 100°. Cyclohexanone peroxide (VI), prepared as described below (6.5 g.), was added with stirring and cooling to FeSO4.7H2O(12 g.), concentrated HCl (6 ml.), and CH2:CHCN (8 g.) in water (40 ml.) at 0 to -5°. Working up as described below gave IV and V. IV hydrolyzed gave α-chloroazelaic acid (VII), m. 86-7°. VII treated as described for II gave azelaic acid (VIII), m. 107°(H2O). V (10 g.) in dioxane (450 ml.) was heated in a sealed tube at 250-5° with ammonia (25 g.) in a nitrogen atmospheric with stirring. The mixture, after cooling, was filtered, the solvent removed, and the residue distilled to give 5.7 g. caprolactam (IX), m. 68°, b0.7 99-101°. Methyl ethyl ketone peroxide (20 g.) in Et2O (15 ml.) was added with stirring and cooling to CH2:CHCN (40 g.), CuCl (25 g.), and 4 g. HCl in H2O (150 ml.) at -10 to 0°. The organic layer was decanted and fractionally distilled to give α-chlorovaleronitrile, b. 160°, which by hydrolysis gave α-chlorovaleric acid, b. 221-2°. Analogously, α-bromovaleric acid, b0.6 84-7°, was obtained and C6-10 α-halo acids were prepared from Me Pr, Me Bu, Me Am, Me hexyl, Me heptyl ketones.